



No.	Author	Date
987	N. Budd Veverka, Farmland Game Research Biologist	09/23/09
	Title	
	2009 American Woodcock Singing-Ground Survey	

Abstract: Five male American woodcock were heard singing on 4 of 17 survey routes in Indiana during 2009. This compares to 3 woodcock heard along 3 of 14 survey routes in 2008. Since 1999, the number of woodcock heard singing during surveys in Indiana has declined an average of 4.24% per year, and an average 1.1% decline per year has been observed since 1968. The primary cause of the population decline is related to the continual loss of early successional moist-soil woodland habitats along migratory routes, on the breeding grounds, and in over-winter areas.

Project #: 300FW0BIRD07000 Activity # BIRD524

The American woodcock is a popular game bird throughout much of the Midwest, particularly with ruffed grouse hunters. Because the species is migratory in nature, the U. S. Fish and Wildlife Service (USFWS) is responsible for its management. State and provincial fish and wildlife agencies, in cooperation with the USFWS, conduct annual counts of male woodcock during the birds' peak display period. Survey data are used to monitor population trends in 2 survey regions; the eastern and central regions. Indiana is 1 of 6 states and 2 provinces in the central management region participating in the annual surveys. Also participating in the survey are the states of Minnesota, Wisconsin, Michigan, Illinois, and Ohio and provinces of Ontario and Manitoba. The Indiana Division of Fish and Wildlife has cooperated with USFWS since the inception of the American woodcock survey in 1968.

Methods

The Office of Migratory Bird Management of the USFWS assigns survey routes and procedures for each state. Each route is 3.6 miles in length and includes 10 listening stops, and the entire survey must be completed in 38 minutes. Beginning shortly after sunset, participants count the number of woodcock heard "peenting" (vocalization of displaying male woodcock on the ground) at each

stop. In 2009, Indiana was assigned 17 routes to be surveyed between 10 April and 5 May. Surveys were not conducted when temperatures dropped below 40° F, during rain, or when winds exceeded 12 mph. At least 9 out of 10 points on each route must be within the prescribed guidelines for the route to be counted in the analysis.

Results

Five woodcock were heard "peenting" on 4 of 17 routes completed in 2009, compared to 3 birds on 3 of 14 routes in 2008. Four routes were common to both years with only 2 birds heard in 2009 on those routes surveyed in 2008 (Table 1). The number of woodcock heard displaying on the 2009 singing-ground survey did not differ significantly from the previous year for both Indiana and the Central Management Region (405 routes). Cooper and Parker (2009) determined, using hierarchical modeling, Indiana has a breeding population index of 0.30 singing-males per route, based on the long-term trend estimates. Also based on Cooper and Parker (2009), the number of woodcock heard in Indiana has declined by an average of 4.24% per year over the last 10 years (1999-2009), and by 4.19% per year from 1968-2009 (Figure 1). These declines are considerably greater than the 0.74% and



1.07% annual decline estimated for the entire Central Management Region over the respective time periods.

Discussion

Like other upland game birds in Indiana, the number of American woodcock has progressively declined over the last 3 decades. Similar in habitat to ruffed grouse, American woodcock favor early successional woodlands associated with forest manipulation. However, habitat requirements for woodcock are more specific than those for ruffed grouse in that early successional habitats are most utilized when they contain areas of moist soils. Moist soil is essential for woodcock because they feed by probing their beak into the ground to find grubs and earthworms. Unfortunately, the reduction in timber harvest on our public and private lands has caused a decrease in the amount of habitat available to American woodcock. Without forest manipulation such as logging and fire, early successional habitats will continue to be lost and populations of American woodcock will continue to decline.

Literature Cited

Cooper, T.R., and K. Parker. 2009. American woodcock population status, 2009. U.S. Fish and Wildlife Service, Laurel, Maryland. 15 pp.

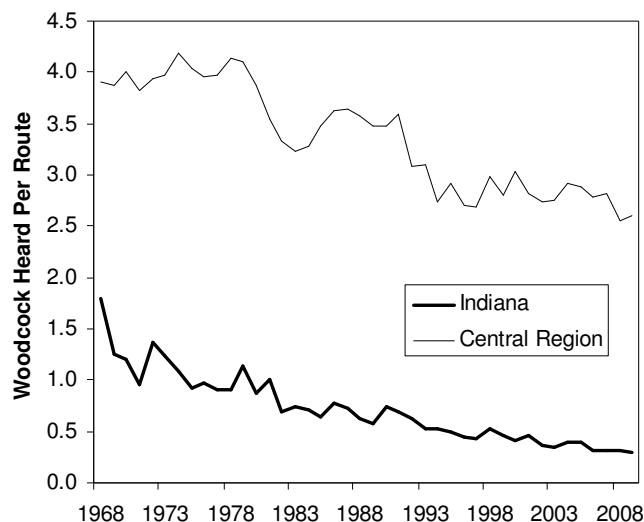


Figure 1. Breeding Population Trends (singing-males per route) for American woodcock from the annual Singing-Ground Survey, 1968-2009 (estimated using hierarchical modeling techniques; Cooper and Parker 2009). The Central Management Region includes the states of Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin, and the Canadian Provinces of Ontario and Manitoba.

Table 1. Number of male American woodcock heard singing along Indiana survey routes from 2007 to 2009.

Route No.	County	2007	2008	2009
1	St. Joseph	0 ^b	NS	NS
5	Steuben	0	NS	NS
12	Dekalb	NS	0	NS
14	Jasper/Starke	1	1	1
15	Kosciusko	NS	0	NS
17	Fulton/Pulaski	1	1	1
19	Newton	0	NS	NS
20	White	0	NS	NS
22	Wabash	NS	NS	0
23	Wells	0	NS	NS
27	Grant	NS	0	NS
29	Fountain	0	NS	NS
34	Vermillion	0	NS	NS
35	Montgomery	0	NS	NS
36	Henry/Wayne	0	NS	NS
37	Wayne	0	NS	NS
38	Hendricks	0	NS	NS
40	Hancock	NS	0	NS
41	Vermillion/Vigo	NS	NS	0
42	Putnam	NS	NS	0
43	Rush	NS	NS	0
44	Fayette	NS	NS	0
45	Morgan	NS	NS	0
46	Johnson	2	1	0
49	Owen	NS	0	NS
50	Bartholomew	NS	NS	0
53	Dearborn	0 ^b	NS	NS
55	Jackson	0	0	NS
58	Lawrence	NS	NS	2
59	Jefferson	0 ^b	NS	NS
60	Switzerland	0 ^b	NS	NS
61	Clark	NS	0	NS
62	Gibson	NS	0	NS
63	Pike	0	NS	NS
65	Orange	NS	NS	1
67	Perry	NS	NS	0
72	Perry	NS	NS	0
73	Starke	NS	NS	0
74	Boone	NS	0	NS
75	Hamilton	NS	0	NS
81	Warrick	0	NS	NS
83	Marshall/Kosciusko	NS	NS	0
85	Jefferson	-	0	0
Males Heard Statewide		4	3	5
Number of routes conducted		20	14	17
Number of Routes used in Analysis		16	14	17

^a NS = not surveyed.

^b Route removed from data analysis for incomplete data.